**8**. The device of claim **1**, wherein the semiconductor layer comprises n-type $TiO_2$.

**9**. The device of claim **1**, wherein the electrode layer comprises gold.

**10**. The device of claim **1**, further comprising an electrical connection between the nanostructured metal layer and the electrode.

**11**. A photovoltaic device comprising:

a nanostructured metal layer that can absorb at least a portion of the electromagnetic spectrum of sunlight and produce hot electrons that have an energy no less than about 0.7 eV;

a semiconductor layer in contact with the nanostructured metal layer to form a Schottky barrier with a barrier height of about 0.7 eV;

an electrode layer in contact with the semiconductor layer to form an ohmic contact.

**12**. The device of claim **11**, wherein the nanostructured metal layer comprises silver.

**13**. The device of claim **12**, wherein the semiconductor layer comprises n-type $TiO_2$.

**14**. The device of claim **13**, wherein the electrode layer comprises gold.

**15**. The device of claim **11**, further comprising an electrical connection between the nanostructured metal layer and the electrode.

**16**. An electronic device, comprising:

a nanostructured silver layer;

an n-type $TiO_2$ layer in contact with the silver layer;

a metal electrode in contact with the $TiO_2$ layer to form an ohmic contact;

an electrical connection between the silver layer and the metal electrode.

**17**. A method of making a photovoltaic device, comprising:

depositing a metal electrode layer onto a substrate;

forming a semiconductor layer on the metal layer;

forming a nanostructured layer of a metal having a surface plasmon resonance within the visible and near-visible spectrum range on the semiconductor layer;

wherein the nanostructured metal layer and the semiconductor layer form an interface that is a Schottky barrier; and

wherein the electrode layer forms an ohmic contact to the semiconductor layer.

**18**. The method of claim **17**, wherein the nanostructured metal layer comprises silver.

**19**. The method of claim **18**, wherein the semiconductor layer comprises n-type $TiO_2$.

**20**. The method of claim **17**, wherein the electrode layer comprises gold.

**21**. The method of claim **19**, wherein the nanostructured silver layer is formed by bombarding a silver target with an ultrafast laser pulse to deposit a thin film of silver nanoparticles onto the layer of $TiO_2$.

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